A4D630-AK09-01

AC axial fan

sickle-shaped blades (S series)

A4D630-AK09-01 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**A4D630-AK09-01**
Motor	**M4D138-LA**

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400	480	480
Wiring		Δ	Y	Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60	60	60
Method of obtaining data		ml	ml	ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE	CE	CE
Speed	min^{-1}	1295	985	1440	980	1540	1135
Power consumption	W	1940	1200	2440	1230	2750	1620
Current draw	A	3.46	2.07	4.1	2.2	3.92	2.36
Max. back pressure	Pa	225	130	120	55	140	75
Min. ambient temperature	°C	-40	-40	-40	-40	-40	-40
Max. ambient temperature	°C	75	75	55	55	55	55

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	35.4	35.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	1.9
09 Air flow q_v	m^3/h	10840
09 Pressure increase p_{fs}	Pa	213
10 Speed n	min^{-1}	1300
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-111108

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Technical description

Weight	25.3 kg
Fan size	630 mm
Rotor surface	Cast in aluminum
Terminal box material	PP plastic
Blade material	Die-cast aluminum
Number of blades	5
Blade pitch	-5°
Airflow direction	"V"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	On rotor and stator sides
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Via terminal box
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); EN 61800-5-1; CE
Approval	EAC; VDE

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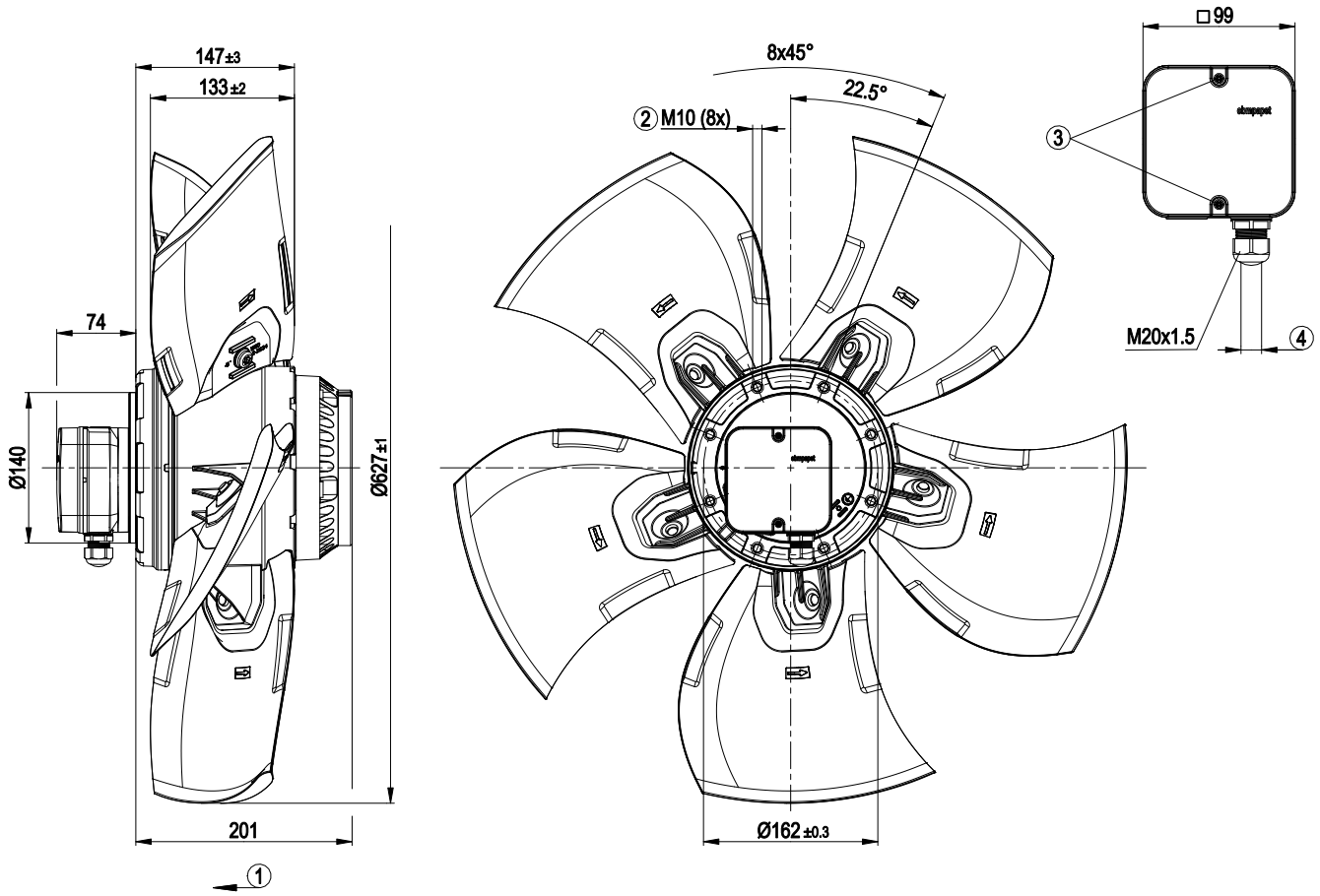
Product drawing



1	Direction of air flow "V"
2	Max. clearance for screw 18 mm
3	Tightening torque 1.5 ± 0.2 Nm
4	Cable diameter min. 7 mm, max. 14 mm; tightening torque 2 ± 0.3 Nm

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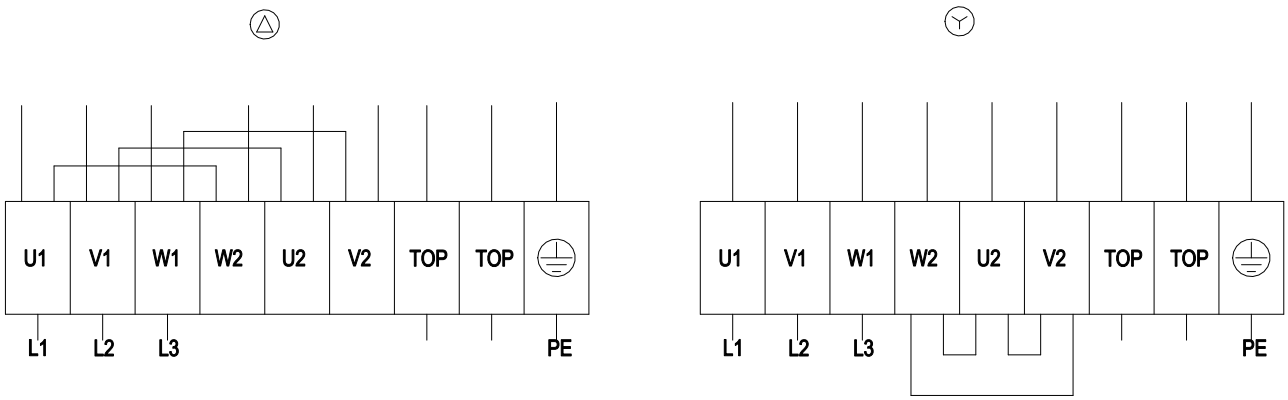
Connection diagram



Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x gray
PE	green/yellow				

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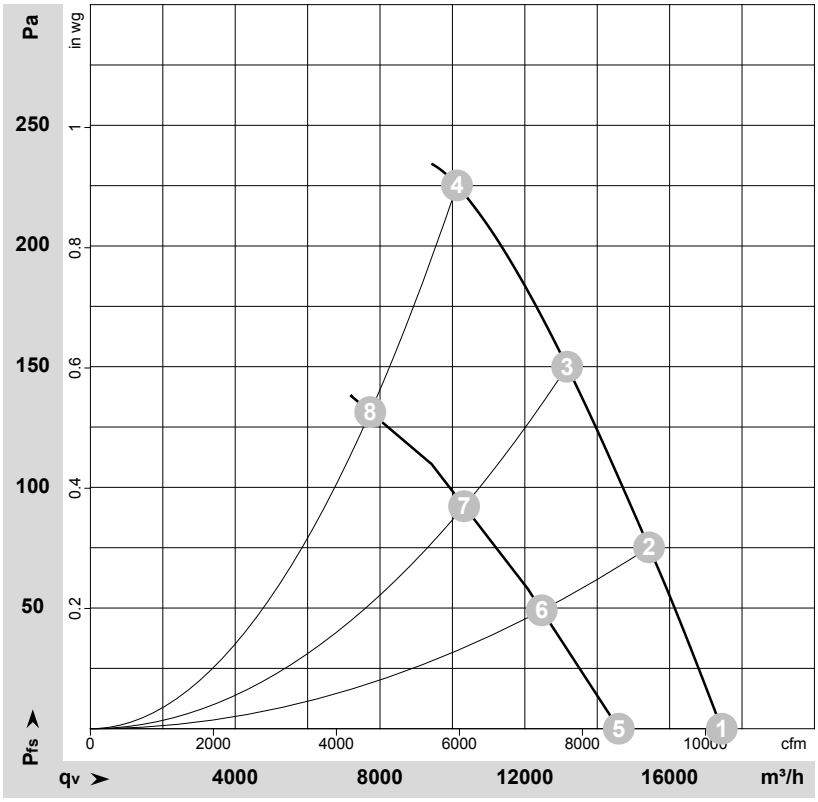
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-111108-1
Measurement: LU-134703-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	400	50	1365	1404	2.61	72	78	78	17440	0
2	Δ	400	50	1340	1600	2.87	69	76	76	15430	75
3	Δ	400	50	1320	1787	3.14	70	77	77	13170	150
4	Δ	400	50	1295	1940	3.46	75	81	80	10125	225
5	Y	400	50	1140	997	1.69	68	74	74	14595	0
6	Y	400	50	1080	1076	1.83	65	71	71	12470	49
7	Y	400	50	1030	1142	1.95	65	71	71	10325	92
8	Y	400	50	985	1200	2.07	68	74	74	7730	130

Wired = Wiring · U = Power supply · f = Frequency · n = Speed · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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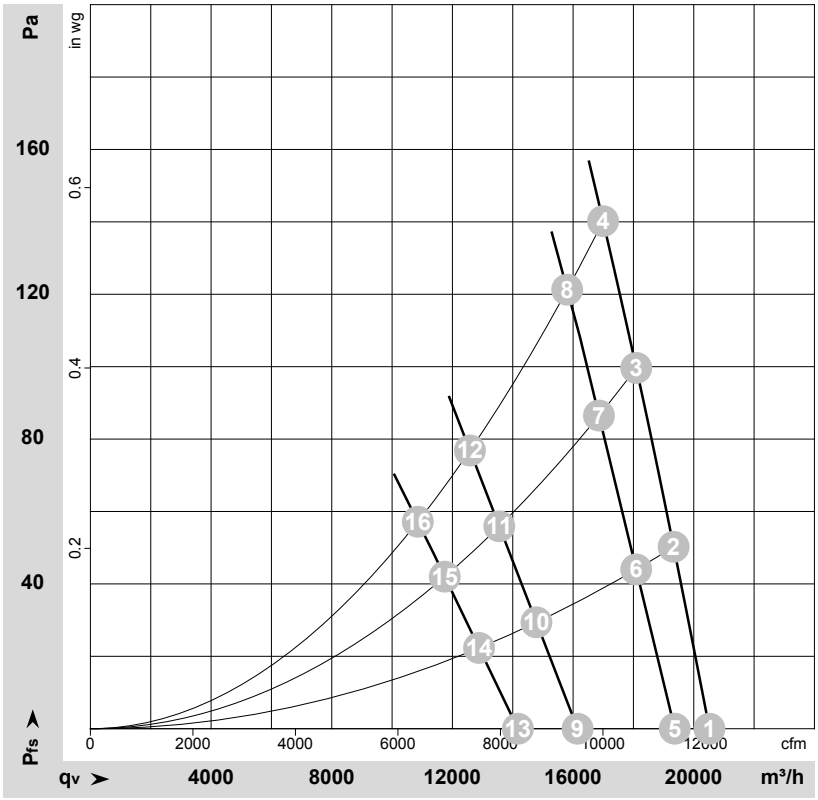
Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-111630-1
Measurement: LU-154791-1
Measurement: LU-154930-1
Measurement: LU-154932-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	480	60	1600	2329	3.40	75	82	83	20520	0
2	Δ	480	60	1580	2480	3.56	73	80	81	19335	50
3	Δ	480	60	1560	2628	3.75	72	79	80	18095	100
4	Δ	480	60	1540	2750	3.92	72	79	80	16995	140
5	Δ	400	60	1515	2122	3.59	74	80	81	19370	0
6	Δ	400	60	1485	2230	3.76	72	79	79	18090	44
7	Δ	400	60	1455	2334	3.93	71	78	78	16860	87
8	Δ	400	60	1440	2440	4.10	71	77	78	15805	120
9	Y	480	60	1260	1516	2.19	70	76	76	16150	0
10	Y	480	60	1210	1555	2.25	69	74	75	14785	29
11	Y	480	60	1165	1590	2.31	67	73	73	13555	56
12	Y	480	60	1135	1620	2.36	67	72	72	12580	77
13	Y	400	60	1100	1182	2.11	67	73	73	14170	0
14	Y	400	60	1050	1198	2.14	66	71	71	12885	22
15	Y	400	60	1005	1211	2.16	65	70	70	11745	42
16	Y	400	60	980	1230	2.20	64	69	69	10850	57

Wired = Wiring · U = Power supply · f = Frequency · n = Speed · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase